## README file for

Evett, Steven R. (2022). Standard Quality Controlled Research Weather Data – USDA-ARS, Bushland, Texas. Ag Data Commons. https://doi.org/10.15482/USDA.ADC/1526433

## Resources in this dataset:

• Resource Title: 1989 Bushland, TX, standard 15-minute weather data.

File Name: 1989\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 1990 Bushland, TX, standard 15-minute weather data.

File Name: 1990\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 1996 Bushland, TX, standard 15-minute weather data.

File Name: 1996\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for

missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 1997 Bushland, TX, standard 15-minute weather data.

File Name: 1997\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 1998 Bushland, TX, standard 15-minute weather data.

File Name: 1998 15-min weather SWMRU CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 1999 Bushland, TX, standard 15-minute weather data.

File Name: 1999\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time

conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 2013 Bushland, TX, standard 15-minute weather data.

File Name: 2013\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 2014 Bushland, TX, standard 15-minute weather data.

File Name: 2014\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 2015 Bushland, TX, standard 15-minute weather data.

File Name: 2015\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 2016 Bushland, TX, standard 15-minute weather data.

File Name: 2016 15-min weather SWMRU CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 2018 Bushland, TX, standard 15-minute weather data.

File Name: 2018 15-min weather SWMRU CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 1991 Bushland, TX, standard 15-minute weather data.

File Name: 1991 15-min weather SWMRU CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 1992 Bushland, TX, standard 15-minute weather data.

File Name: 1992\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 1993 Bushland, TX, standard 15-minute weather data.

File Name: 1993\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 1994 Bushland, TX, standard 15-minute weather data.

File Name: 1994 15-min weather SWMRU CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Note that the mean daily precipitation may be larger than daily precipitation on any one lysimeter if there are missing data for a lysimeter or lysimeters on that day. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 2009 Bushland, TX, standard 15-minute weather data.

File Name: 2009 15-min weather SWMRU CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 2011 Bushland, TX, standard 15-minute weather data.

File Name: 2011\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

Resource Title: 2004 Bushland, TX, standard 15-minute weather data.

File Name: 2004\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Note that the mean daily precipitation may be larger than daily precipitation on any one lysimeter if there are missing data for a lysimeter or lysimeters on that day. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 2010 Bushland, TX, standard 15-minute weather data.

File Name: 2010\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Note that the mean daily precipitation may be larger than daily precipitation on any one lysimeter if there are missing data for a lysimeter or lysimeters on that day. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 1995 Bushland, TX, standard 15-minute weather data.

File Name: 1995\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Note that the mean daily precipitation may be larger than daily precipitation on any one lysimeter if there are missing data for a lysimeter or lysimeters on that day. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 2003 Bushland, TX, standard 15-minute weather data.

File Name: 2003\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Note that the mean daily precipitation may be larger than daily precipitation on any one lysimeter if there are missing data for a lysimeter or lysimeters on that day. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

• Resource Title: 2019 Bushland, TX, standard 15-minute weather data.

File Name: 2019\_15-min\_weather\_SWMRU\_CPRL.xlsx.

Resource Description: The weather data are presented as 15-minute mean values of solar irradiance, air temperature, relative humidity, wind speed, and barometric pressure; and as 15-minute totals of precipitation (rain and snow). Daily total precipitation as determined by mass balance at each of the four large, precision weighing lysimeters is given in a separate tab along with the mean daily value of precipitation. Note that the mean daily precipitation may be larger than daily precipitation on any one lysimeter if there are missing data for a lysimeter or lysimeters on that day. Data dictionaries are in separate tabs with names corresponding to those of tabs containing data. A separate tab contains a visualization tool for missing data. Another tab contains a visualization tool for the weather data in five-day increments of the 15-minute data. An Introduction tab explains the other tabs, lists the authors, explains data time conventions, explains symbols, lists the sensors, and datalogging systems used, and gives geographic coordinates of sensing locations.

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